REMARKS

Applicant through this undersigned representative re-affirms the provisional election made on May 12, 2005 to continue prosecution of Group II claims, claims 14-18. Applicant states that no change in inventorship is necessary under 37 C.F.R. 1.48(b) in view of the aforesaid election.

Claim 18 has been amended to properly recite the Markush grouping with the portion of the original claim having been deleted reciting specific weight percentages and represented in new claim 19.

Claims 14 and 16 are rejected as being anticipated by Baehr et al, U.S. Patent No. 4,880,566.

Applicant has reviewed said reference and disagrees with this conclusion of anticipation of these claims in view of the disclosure of Baehr et al. This reference is concerned with the stabilization of aqueous peroxide bleaching baths, wherein the use of silicate and magnesium are taught to not be necessarily included in the stabilizer bath. The text of the specification of this reference at column 1, line 16-25 recognizes the decreasing stability of alkaline hydroxide baths as the temperature increases in the process of bleaching cellulose and synthetic fibers.

This teaches a stabilized aqueous (bleaching) bath free of both silicates and magnesium by employing a mixture of:

a) polyhydroxy carboxylic acid and/or hydroxy carboxylic acid and their alkali metal and/or ammonium salts in an amount ranging from about 5 – 30% by weight;

b) from about 1 – 5% by weight polyacrylic acid in a partially neutralized form; and

c) from about 2 20% by weight of polyamine-phosphonic acid and/or amine-poly phosphonic acid and their alkali metal and/or ammonium salts;

provided the ratio of a:b:c is from 1 to 6:0.2 to 1:0.4 to 4.

The claimed composition is distinctly different with respect to both compositional make up as well as functional purpose from that of Baehr et al.

Firstly, the claimed composition is not concerned with eliminating the use of silicates or magnesium in the papermaking process by stabilization of the peroxide.

Rather, the claimed composition comprises:

a) from about 40 weight % to about 60 weight % water;

b) from about 20 weight % to about 95 weight % diethylenetriaminepentakis(methyl)phosphonic acid or its known salts;

c) from about 5 weight % to about 50 weight % polyacrylic acid or its known salts; and optionally from about 1 weight % to about 20 weight % of one or more inert compounds.

The claim further specifies that the component is added to a pulp either before or during bleaching. Alternate embodiments disclose that the mixture as defined above can be used as a replacement to hydrogen peroxide to a chemical pulp. (see specification, page 14, last paragraph bridging page 15)

The specification does discuss the ability to lessen the amount of magnesium used which is stated to have an adverse or detrimental effect on brightness. (see page 15, lines 3-10) The specification teaches lessening the amount of magnesium, not eliminating its inclusion.

Furthermore, the Applicants have discovered a new and useful composition of matter which exhibits a synergistic effect while providing a more cost effective means for achieving desired pulp brightness by including the use of the diethylenetriaminepentakis(methyl)phosphonic acid (DTMPA) and salts in conjunction with

polyacrylic acid. The amount of the polyacrylic acid can be adjusted to greater levels leading to a reduction in quantity of the DTMPA necessary to achieve the desired result(s).

In sum, the composition as claimed is disclosed as being a possible substitute for the inclusion of hydrogen peroxide as an oxidizing or bleaching agent. The proper combination of DTMPA and the polyacrylic acid component can lead a smaller weight % of DTMPA necessary to achieve the target brightness. The reduction in the amount of magnesium is also disclosed when employing the claimed composition results in still greater cost savings in the overall papermaking process.

Baehr et al. simply does not teach or anywhere disclose DTMPA as a component in any of the stabilizer mixtures taught. In fact, at column 2 there is a brief recitation of the preferred amine polyphosphonic acids and their alkali metal or ammonium salts. No where is DTMPA recognized much less the combination of DTMPA with polyacrylic acid and the synergistic effect of this combination in the bleaching process.

In fact, the organic phosphonates (DTMPA) are employed as chelants which serve to mitigate unproductive side reactions catalized by the inclusion of transitional metal ions.

This chemistry including the combination of claim 14, the synergy experienced and the favourable reduction of cost associated with the use of less expensive reactants in the papermaking process as set forth in the subject application is simply not met by the Baehr et al reference on an element by element basis. Therefore, the objection under 35 U.S.C. 102(b) is believed to be overcome.

Claim 17 is rejected as being obvious under 35 U.S.C. 103(a) over Baehr et al. in view of Christiansen, U.S. Patent No. 4,614,646.

In the statement of rejection it is admitted that the subject matter of originally filed claim 17 is not disclosed in Baehr et al. as regards the inclusion of sodium polyacrylate.

It is concluded that while the Christiansen reference teaches alkali polyacrylate and polyacrylic acid as polymer agent that they would be interchangeable in terms of use and the functional equivalent of chelants in a similar aqueous stabilizer mixture. A conclusion is drawn that it would be obvious to replace polyacrylic acid with sodium polyacrylate as one of ordinary skill in the art would recognize the expected interchangeability as function equivalent chelant.

Applicant strongly disagrees with both the assumption and conclusion on several technical and legal grounds.

Firstly, there is no teaching of the combination of elements as disclosed and claimed in the instant application where the DTMPA and polyacrylic acid are combined to produce an enhanced or synergistic effect in the whiteness and brightness when employed in the papermaking process as discussed in the instant specification. Furthermore, there is not even the remotest suggestion for the assumed recognizable combination of these elements much less the surprising synergistic effect disclosed in the instant application.

The Christiansen reference discloses and claims the addition of an aminophosphonic acid chelant and at least one polymer of an unsaturated carboxylic (a) acid; (b) amine or (c) amide and their ammonium alkali metal or amine salt of either of (a), (b) or (c) or a combination of these functional groups.

The subject matter of the invention as defined in claim 14 simply is not met by either reference alone or in combination.

From a legal perspective, the combination of these two references is submitted simply not to be permissible as no where in either reference is there disclosed any explicit or implicit

rationale for one skilled in the art to combine them. As admitted in the Action, Christiansen does not disclose the final element for which it has asserted Baehr is deficient.

Rather, a simple statement is made that one of ordinary skill in the art would readily recognize that a similar compound, while not disclosed, is a functional equivalent of what Applicant has set forth and claimed.

In view of the stated arguments and distinctions set forth hereinabove, the claimed composition as set forth in claim 14 has been shown not to be disclosed in Baehr alone or in combination with Christiansen provided the combination of these references were legally proper even if the Law permitted such combinations, the conclusion of substituting one reactant or element for a similar compound would be an obvious expedient for the person of ordinary skill in the art simply misses the mark.

Neither reference alone or in combination teaches the claimed composition as set forth in claim 14 much less the surprising synergy that Applicant has both discovered and disclosed.

In view of the aforesaid, the formalistic objections to the claims have been remedied by way of amendment as discussed above. The substantive rejections asserting anticipation and obviousness have been mooted by the arguments provided, therefore Applicant believes that the claimed invention is patentable as possessing both novelty and not being obvious. Favorable reconsideration is requested.

Respectfully Submitted,

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